

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Petition for Rulemaking of the Wireless
Ethernet Compatibility Alliance To Permit
Unlicensed National Information Infrastructure
Devices To Operate in the 5.470-5.725 GHz
Band

RM-10371

To: The Commission

RECEIVED & INSPECTED

JUN 14 2002

FCC - MAIL ROOM

COMMENTS OF SHARP LABS OF AMERICA

I. INTRODUCTION

Sharp Labs of America hereby submits comments in the above captioned proceeding to encourage the Federal Communications Commission ("Commission" or "FCC") to approve the Petition to allocate the 5.470-5.725 GHz band for use by radio local area network ("RLAN") and other unlicensed service devices.

Sharp Labs of America is currently developing technologies to be used for wireless home networks, which is sold to customers both in the United States and in Europe. Sharp Labs is undertaking this development as a subsidiary of Sharp Corporation. Currently, home networks employing wireless LAN technology are capable of providing at most approximately 40 Mbps, on a single physical channel, at a physical data transfer rate of 54Mbps. If the Commission allocates additional spectrum in the 5 GHz band this would allow devices that would have higher quality data transfer, as well as decreased interference to other wireless LANs as well as other services that use the 5GHz band, in addition to services in nearby bands. The public would

WETMAIN 1089227.1

No. of Copies rec'd 0
List ABCDE

benefit from allocation of the additional spectrum because it would be able to utilize more fully the emerging resource intensive multi-media applications, as well as provide higher quality wireless services, and to enable these to be more broadly distributed in the marketplace, as the possibility of interference from neighboring users would be reduced.

Moreover, if additional spectrum is allocated in the 5.470-5.725 band, Sharp would be able to produce wireless home networking products for distribution in both the domestic market and the European market without any modifications, which would in turn provide lower prices to consumers. Finally, Sharp anticipates that future revisions to the wireless networks will allow the product to transfer data at even higher rates- up to 100Mbps, but only if it is allowed to operate within a bandwidth that is greater than is now available.

We strongly believe action in accordance with the WECA petition would be in the public interest and ask the Commission to allocate the additional spectrum for use by WLAN and other wireless devices.

II. DISCUSSION

A. Allocating additional spectrum is in the public interest due to increased competition in the wireless industry domestically and globally

Broadband access to information is becoming a reality to Japan, and Europe. Wireless access to this information infrastructure, as envisioned by the Commission and the U.S. Congress would enable rapid deployment of new devices both in the home and outside of it. This is of course becoming a reality with the ISM band 802.11b deployments. However, increased bandwidth would mean larger capacity networks, which would mean lower costs to the consumer, and would spur further deployment and new services. It would allow for "hybrid devices" that merge wireless LAN and 3G/4G data services. At Sharp, we are particularly

interested in the potential for using these devices to transfer content from a variety of sources, whether from the Internet or from a consumer AV device. This convergence of functionality, at the radio level, would again bring cost savings to consumers. Thus, the best way this can be achieved is by increasing bandwidth allocations.

B. Sharp's Home Networks will require additional spectrum

Currently the ISMA bands allocate at most 20 channels that enable data transfer rates at best at 40Mbps (actual payload delivered to users). Home network applications should require at least 100Mbps per user; in dense multiple-dwelling unit infrastructures, the number of channels can easily be used up if current 802.11a systems become widely deployed, as predicted. This, as well as the emerging "smart vehicle" markets, place increasing demands on spectrum which can best be met by expanding the available allocated bands for the Unlicensed National Information Infrastructure.

C. Allocating spectrum in the 5.470-5.725 band would allow Sharp to produce Home Networks for multiple markets without modification

Sharp Corporation is an international company, which sells products worldwide, and manufactures products in the United States. If the 5.47-5.725GHz . If bands in Europe and Japan are the same as those in the United States, it would mean that products would not have to be modified for different markets, resulting in lower prices for consumers. In addition, it would spur other areas of the world to harmonize their spectrum allocations as well, increasing the market size.

D. Sharp's Home Network Products will not cause harmful interference

Sharp intends to deploy their Home Networks with Transmit Power Control as well as Dynamic Frequency Selection, both to maximize capacity of the network as well as minimize interference to any radar or systems that may be nearby in frequency.

E. The current rules for the 5.25-5.35 GHz band should be extended to the 5.470-5.725 GHz band.

Sharp makes a variety of portable products that can be used in the home as well as outside of it. These products- with wireless LAN capability built in- would benefit by being able to use greater bandwidth available for indoor/outdoor operation as opposed to strictly indoor operation.

III. CONCLUSION

For the foregoing reasons, Sharp Labs of America respectfully requests the Commission to grant the Petition for Rulemaking and to amend Part 15 of the rules, authorizing the use of the 5.470-5.725 GHz band by U-NII devices. The proposed rules should merely extend the current rules governing the operation of U-NII devices in the 5.25-5.35 GHz band to the newly authorized band.

Respectfully submitted,

SHARP LABS OF AMERICA

By:  _____

John M. Kowalski, Ph.D

Manager, Communication Systems

SHARP LABS OF AMERICA

5750 NW Pacific Rim Blvd.

Camas, WA 98607

Tel: (360) 817-7520

Dated: June 5, 2002